ABSTRAK

Penelitian ini bertujuan untuk merancang *operational information system e-bird competition* menggunakan integrasi website dan aplikasi online serta menggunakan teknologi sensor ultrasonik berbasis kecerdasan buatan *(artificial intelligence)* dalam deteksi pelanggaran *(fraud)* yang dilakukan oleh peserta atau oknum juri lomba. Metodologi yang digunakan adalah penelitian kualitatif deskriptif dengan metode eksploratori. Sedangkan data yang digunakan dalam penelitian ini menggunakan data primer melalui wawancara dengan narasumber terkait dan pengamatan lapangan untuk menganalisis sumber permasalahan yang terjadi seperti lemahnya pelaksanaan standar dan mekanisme lomba burung kicau.

Kontribusi penelitian telah berhasil menyusun rancangan *operational information system* dengan mengintegrasikan data pengelolaan website/aplikasi online untuk efektivitas dan efisiensi lomba burung kicau dengan data deteksi pelanggaran *(fraud)* melalui teknologi kecerdasan buatan *(artificial intelligence)* berbasis analisis sensor ultrasonik. Proses integrasi data ditampilkan dalam bentuk rancangan *data flow diagram, flowchart* dan *entity relationship diagram. Output* usulan sistem operasionalnya antara lain, laporan kesiapan kebutuhan lomba, laporan analisis selera kicau mania, rekapitulasi hasil penjualan tiket, laporan rekam aktivitas web dan aplikasi lomba, laporan pelanggaran *(fraud)* & sanksi peserta, laporan pelanggaran *(fraud)* & sanksi juri dan rekapitulasi hasil poin & laporan pemenang. Sedangkan dari *output* usulan disisi efisiensi perancangan sistem terdapat notifikasi 1, notifikasi 2 dan notifikasi 3.

Kata Kunci : *E-Bird Competition, Artificial Intelligence, Operational Information System, Fraud*

ABSTRACT

This research aims to design an operational information system e-bird competition using an integration website and online applications as well as ultrasonic sensor-based technology uses artificial intelligence in the detection of the fraud conducted by participants or members of the judges of the race. The methodology used was qualitative research with descriptive exsploratory method. Meanwhile the data used in this study using primary data through interviews with relevant sources and field obervations to analyze the source of problem that occur such as the weak implementation of standards and the mechanism of bird chirping competition.

The contribution of this his research has succeeded in drafting the operational information system by integrating website management data or online application for effectiveness and efficiency of birdsong competition with fraud detection data through artificial intellegence technology based on ultrasonic sensor analysis. The process of integration of the data displayed in the form of draft data flow diagrams, entity relationship diagram and flowchart. The output of the proposed operational system is reports on readiness needs of the race, the report analyses the tastes of birdsong mania, recapitulation the results of ticket sales, the report on the web activity and the competition application, the fraud and sanction reports of the participants, the fraud and sanction reports of the jury, the recapitulation of the winning points and the report of the winner. While from the proposed output side efficiency of designing system there are notification 1, notification 2 and notification 3.

Keywords: E-Bird Competition, Artificial Intelligence, Operational Information System, Fraud